

STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 127319

TO: Shailendra Kumar
Location: 5d61 / 5c18
Sunday, July 25, 2004
Art Unit: 1621
Phone: 272-0640
Serial Number: 10 / 612609

From: Jan Delaval
Location: Biotech-Chem Library
Rem 1A51
Phone: 272-2504

jan.delaval@uspto.gov

Search Notes

Jan please

Access DB# 127319

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: S. Kumar Examiner #: 69594 Date: 7/15/04

Art Unit: 1621 Phone Number 301 272-0640 Serial Number: 101612609

Mail Box and Bldg/Room Location: ADM 5506 Results Format Preferred (circle): PAPER DISK E-MAIL
5C18

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Chiral chelating agent and chiral catalyst

Inventors (please provide full names): Kwunmin Chen et al.

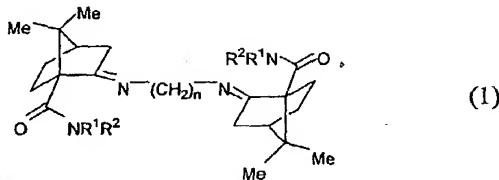
Earliest Priority Filing Date: 2/27/03

File:10566USF.RTF

*Jan
7/25/04*

WHAT IS CLAIMED IS:

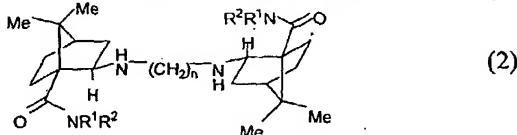
1. A chiral chelating agent having a formula (1) as follows and an enantiomeric isomer thereof:



5 wherein R¹ and R² represent H, methyl, ethyl, a primary, secondary or tertiary straight, branched or cyclic alkyl group having 3-7 carbon atoms, a heterocyclic or aromatic group, an aromatic group substituted at the 2-, 3- or 4-position, an aromatic-like group, or a naphthyl or naphthyl-derived group, and n is an integer between 0 and 4.

2. A chiral chelating agent having a formula (2) as follows and an enantiomeric

10 isomer thereof:



wherein R¹ and R² represent H, methyl, ethyl, a primary, secondary or tertiary straight, branched or cyclic alkyl group having 3-7 carbon atoms, a heterocyclic or aromatic group, an aromatic group substituted at the 2-, 3- or 4-position, an aromatic-like group, or a naphthyl or naphthyl-derived group, and n is an integer between 0 and 4.

- 15 3. A chiral chelating agent having a formula (3) as follows and an enantiomeric

isomer thereof:

=> fil reg
FILE 'REGISTRY' ENTERED AT 15:28:08 ON 25 JUL 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 JUL 2004 HIGHEST RN 715654-51-6
DICTIONARY FILE UPDATES: 23 JUL 2004 HIGHEST RN 715654-51-6

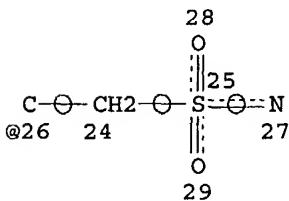
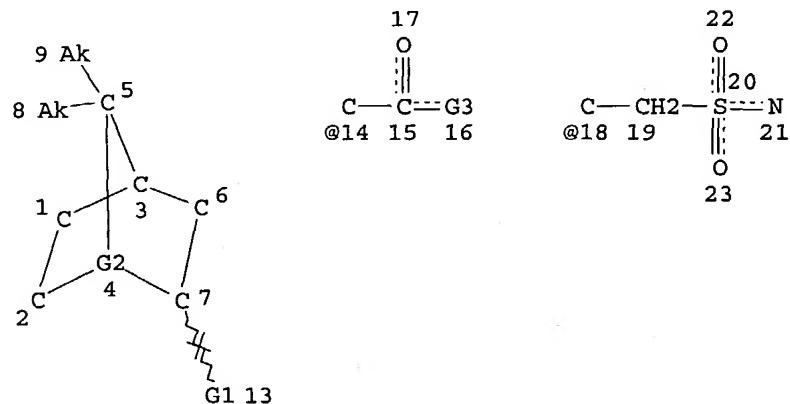
TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

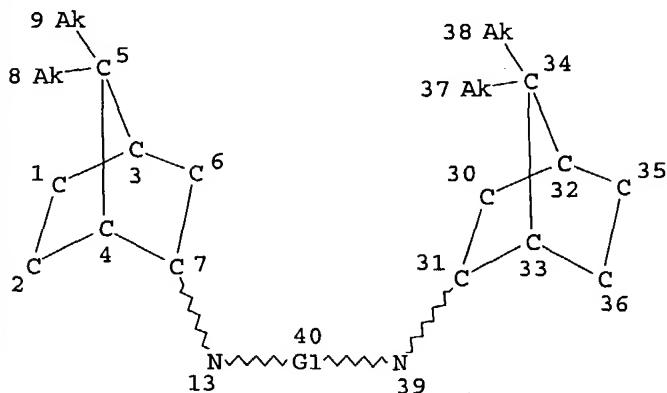
=> d sta que 18
L1 STR



VAR G1=O/N
VAR G2=14/18/26
VAR G3=O/N
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 7
NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L5 2534 SEA FILE=REGISTRY SSS FUL L1
L6 STR

REP G1=(0-1) AK

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 8
 CONNECT IS E1 RC AT 9
 CONNECT IS E1 RC AT 37
 CONNECT IS E1 RC AT 38
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 34 7
 NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L8 4 SEA FILE=REGISTRY SUB=L5 SSS FUL L6

100.0% PROCESSED 64 ITERATIONS

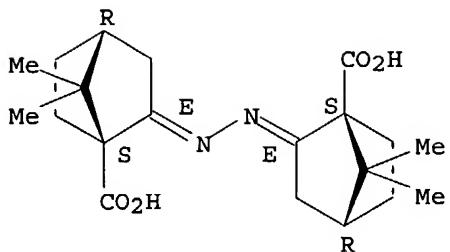
4 ANSWERS

SEARCH TIME: 00.00.01

> d ide can tot 18

L8 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 500224-35-1 REGISTRY
 CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-azinobis[7,7-dimethyl-,
 (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C20 H28 N2 O4
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA CAPLUS document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties); USES
 (Uses)

Absolute stereochemistry.
 Double bond geometry as shown.



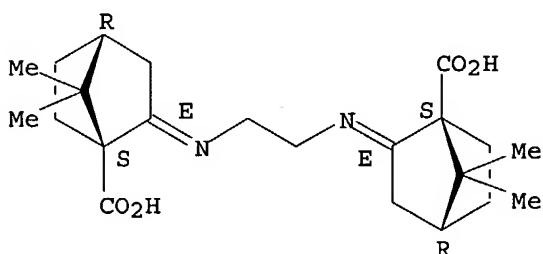
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:204497

L8 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 500224-32-8 REGISTRY
 CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyl)dinitrilo)bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C22 H32 N2 O4
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA CAplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
 Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

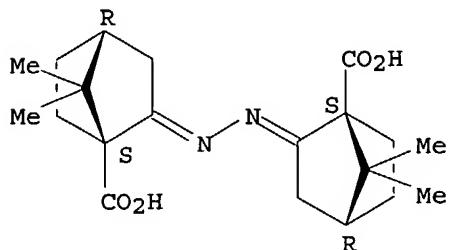
1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: .138:204497

L8 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 423770-46-1 REGISTRY
 CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-azinobis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C20 H28 N2 O4
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry unknown.



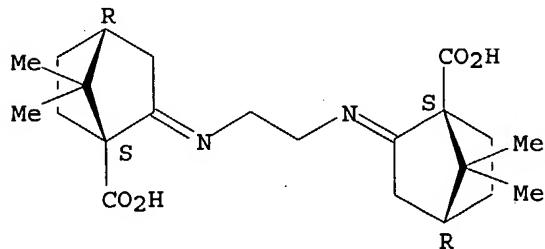
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369559

L8 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN.
RN 423770-45-0 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediylidinitrilo)bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H32 N2 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAPplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry unknown.

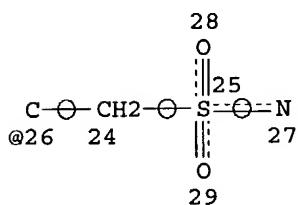
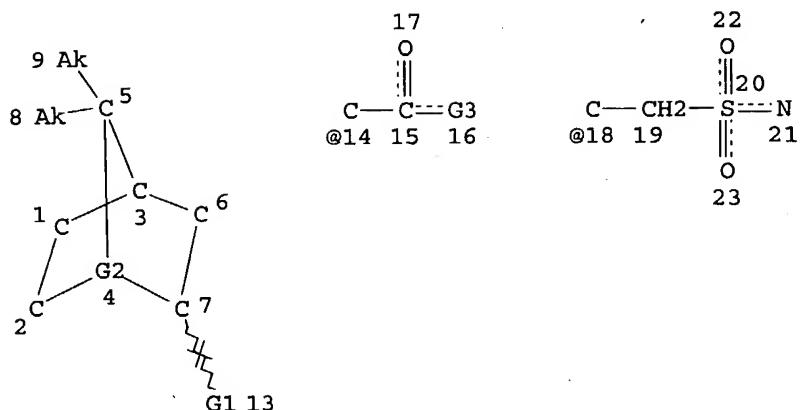


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369559

=> d sta que l11
L1 STR



VAR G1=O/N

VAR G2=14/18/26

VAR G3=O/N

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

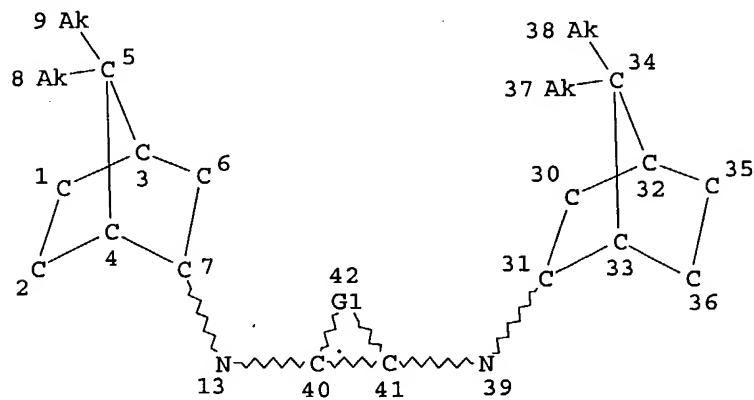
RSPEC 7

NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L5 2534 SEA FILE=REGISTRY SSS FUL L1

L9 STR



REP G1=(0-4) C

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 8

CONNECT IS E1 RC AT 9

CONNECT IS E1 RC AT 37

CONNECT IS E1 RC AT 38

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 31 7
NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE
L11 6 SEA FILE=REGISTRY SUB=L5 SSS FUL L9

100.0% PROCESSED 6 ITERATIONS
SEARCH TIME: 00.00.01

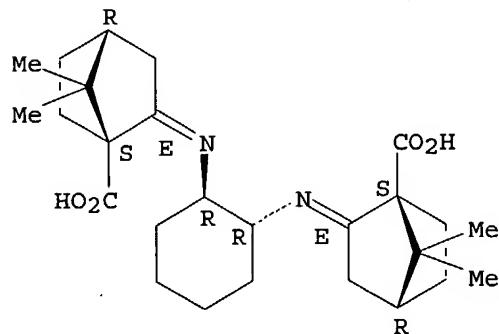
6 ANSWERS

=> d ide can tot l11

L11 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500224-34-0 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[^{(1R,2R)-1,2-}
cyclohexanediyldinitrilo]bis[^{7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI)}
(CA INDEX NAME)
FS STEREOSEARCH
MF C26 H38 N2 O4
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties); USES
(Uses)

Absolute stereochemistry.

Double bond geometry as described by E or Z.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

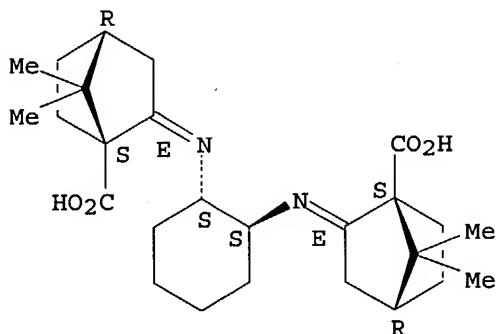
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:204497

L11 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500224-33-9 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[^{(1S,2S)-1,2-}
cyclohexanediyldinitrilo]bis[^{7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI)}
(CA INDEX NAME)
FS STEREOSEARCH
MF C26 H38 N2 O4
SR CA

LC STN Files: CA, CAPLUS
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
 Double bond geometry as described by E or Z.



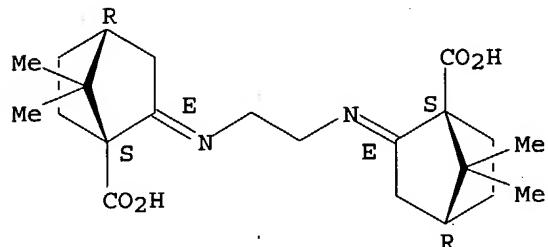
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:204497

L11 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 500224-32-8 REGISTRY
 CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyldinitrilo)bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C22 H32 N2 O4
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
 Double bond geometry as shown.



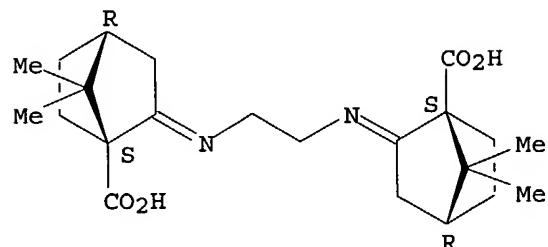
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:204497

L11 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 423770-45-0 REGISTRY
 CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyldinitrilo)bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C22 H32 N2 O4
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA CAplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
 Double bond geometry unknown.



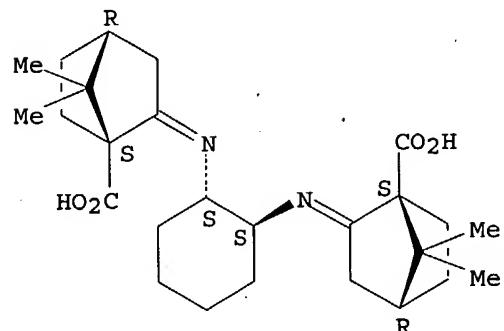
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369559

L11 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 404582-36-1 REGISTRY
 CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[{(1S,2S)-1,2-cyclohexanediyldinitrilo}bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C26 H38 N2 O4
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA CAplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
 Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

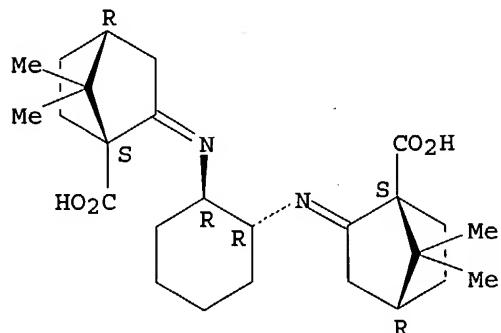
2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369559

REFERENCE 2: 136:247173

L11 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 404582-34-9 REGISTRY
 CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-([(1R,2R)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C26 H38 N2 O4
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA CAplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
 Double bond geometry unknown.



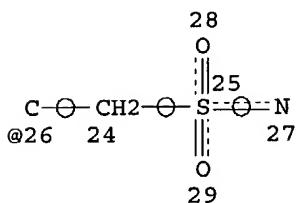
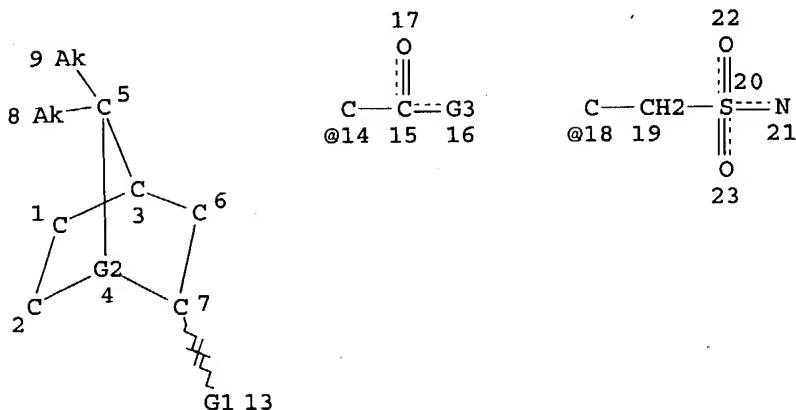
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369559

REFERENCE 2: 136:247173

=> d que 113
 L1 STR



VAR G1=O/N
VAR G2=14/18/26

VAR G3=O/N

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 7

NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L5 2534 SEA FILE=REGISTRY SSS FUL L1
L12 11 SEA FILE=REGISTRY ABB=ON PLU=ON L5 AND C6-C6/ES AND NR>=8
L13 0 SEA FILE=REGISTRY ABB=ON PLU=ON L12 NOT (S OR P)/ELS

=> d his

(FILE 'HOME' ENTERED AT 14:57:50 ON 25 JUL 2004)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 14:58:00 ON 25 JUL 2004

L1 STR
L2 13 S L1
L3 STR L1
L4 0 S L3
L5 2534 S L1 FUL
SAV TEMP KUMAR612/A L5
L6 STR L3
L7 0 S L6 SAM SUB=L5
L8 4 S L6 FUL SUB=L5
SAV L8 TEMP KUMAR612A/A
L9 STR L6
L10 0 S L9 SAM SUB=L5
L11 6 S L9 FUL SUB=L5

SAV TEMP L11 KUMAR612B/A
L12 11 S L5 AND C6-C6/ES AND NR>=8
L13 0 S L12 NOT (S OR P)/ELS

FILE 'HCAPLUS' ENTERED AT 15:19:56 ON 25 JUL 2004

E CHEN K/AU
L14 1611 S E3-E35
E CHEN KWUN/AU
L15 22 S E5
E YANG K/AU
L16 583 S E3-E24
E YANG KUNG/AU
L17 11 S E7,E8
E LEE W/AU
L18 2515 S E3-E63
E LEE WEI/AU
L19 39 S E3,E10
E PAN J/AU
L20 473 S E3-E29
E PAN JIA/AU
L21 5 S E3,E5
L22 4 S E26
L23 3 S L8,L11
L24 3 S L14-L22 AND L23
L25 23 S L14-L22 AND P/DT
E TW2003-92104138/AP,PRN
L26 1 S L14-L22 AND TW/PC,PRC,AC
L27 741 S L5
L28 6 S L14-L22 AND L27
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 15:27:22 ON 25 JUL 2004

L29 12 S E1-E12
L30 4 S L29 NOT L8,L11

FILE 'USPATFULL, USPAT2' ENTERED AT 15:27:57 ON 25 JUL 2004

L31 0 S L8 OR L11

FILE 'REGISTRY' ENTERED AT 15:28:08 ON 25 JUL 2004

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 15:28:42 ON 25 JUL 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 25 Jul 2004 VOL 141 ISS 5
FILE LAST UPDATED: 23 Jul 2004 (20040723/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 124 all hitstr tot

L24 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:977476 HCAPLUS
 DN 138:204497
 ED Entered STN: 29 Dec 2002
 TI Chiral Lewis Acid-Catalyzed Asymmetric Baylis-Hillman Reactions
 AU Yang, Kung-Shuo; Lee, Wei-Der; Pan, Jia-Fu;
 Chen, Kwunmin
 CS Department of Chemistry, National Taiwan Normal University, Taipei, 116,
 Taiwan
 SO Journal of Organic Chemistry (2003), 68(3), 915-919
 CODEN: JOCEAH; ISSN: 0022-3263
 PB American Chemical Society
 DT Journal
 LA English
 CC 21-2 (General Organic Chemistry)
 Section cross-reference(s): 75
 OS CASREACT 138:204497
 AB An effective chiral Lewis acid-catalyzed asym. Baylis-Hillman reaction is described. Good to high enantioselectivities were obtained using 3 mol % chiral catalyst. Novel camphor-derived dimerized ligands were prepared from the condensation of (+)-ketopinic acid with diamines and hydrazine under acidic conditions. When α -naphthyl acrylate was used as a Michael acceptor, the reaction is complete within 20 min with high stereoselectivity and in reasonable chemical yields.
 ST Baylis Hillman asym chiral Lewis acid catalyst
 IT Addition reaction
 (Baylis-Hillman, stereoselective; chiral Lewis acid-catalyzed asym.
 Baylis-Hillman reactions)
 IT Asymmetric synthesis and induction
 (chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
 IT Lewis acids
 RL: CAT (Catalyst use); USES (Uses)
 (chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
 IT Ligands
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
 USES (Uses)
 (chiral; chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
 IT Addition reaction catalysts
 (stereoselective, Baylis-Hillman; chiral Lewis acid-catalyzed asym.
 Baylis-Hillman reactions)
 IT 52093-26-2, Lanthanum(III) triflate
 RL: CAT (Catalyst use); USES (Uses)
 (chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
 IT 500224-32-8P 500224-33-9P
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
 USES (Uses)
 (chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
 IT 75-07-0, Acetaldehyde, reactions 78-84-2, Isobutyraldehyde 96-33-3,
 Methyl acrylate 100-52-7, Benzaldehyde, reactions 104-53-0,
 3-Phenylpropanal 107-15-3, Ethylenediamine, reactions 123-11-5,
 p-Anisaldehyde, reactions 123-38-6, Propionaldehyde, reactions
 555-16-8, 4-Nitrobenzaldehyde, reactions 937-41-7, Phenyl acrylate
 1121-22-8, trans-1,2-Cyclohexanediamine 1663-39-4, tert.-Butyl acrylate
 2043-61-0, Cyclohexanecarboxaldehyde 2495-35-4, Benzyl acrylate
 20069-66-3, 1-Naphthyl acrylate 40724-67-2, (+)-Ketopinic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
 IT 500166-64-3P 500166-69-8P 500166-70-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)

IT 108945-27-3P 112572-93-7P 140238-43-3P 140630-33-7P 189372-86-9P
 221346-91-4P 293307-67-2P 500166-63-2P 500166-65-4P 500166-66-5P
 500166-67-6P 500166-68-7P 500166-71-2P 500166-72-3P 500166-73-4P
 500166-74-5P 500166-75-6P 500166-76-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)

IT 500224-34-0P 500224-35-1P
 RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);
 PREP (Preparation); USES (Uses)
 (crystal structure of)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Aggarwal, V; J Chem Soc, Chem Commun 1996, P2713 HCAPLUS
- (2) Aggarwal, V; J Org Chem 1998, V63, P7183 HCAPLUS
- (3) Barrett, A; J Chem Soc Chem Commun 1998, P2533 HCAPLUS
- (4) Barrett, A; J Chem Soc, Chem Commun 1995, P1755 HCAPLUS
- (5) Basavaiah, D; Tetrahedron 1996, V52, P8001 HCAPLUS
- (6) Brzezinski, L; J Am Chem Soc 1997, V119, P4317 HCAPLUS
- (7) Ciganek, E; Org React 1997, V51, P201 HCAPLUS
- (8) Corey, E; J Am Chem Soc 1994, V116, P3611 HCAPLUS
- (9) Drewes, S; Tetrahedron 1988, V44, P4653 HCAPLUS
- (10) Drewes, S; Tetrahedron:Asymmetry 1992, V3, P255 HCAPLUS
- (11) Hahn, F; Chem Ber 1990, V123, P481 HCAPLUS
- (12) Hayase, T; J Chem Soc, Chem Commun 1998, P1271 HCAPLUS
- (13) Ishihara, K; J Org Chem 2000, V65, P9125 HCAPLUS
- (14) Iwabuchi, Y; Am Chem Soc 1999, V121, P10219 HCAPLUS
- (15) Iwabuchi, Y; Chem Commun 2001, P2030 HCAPLUS
- (16) Iwabuchi, Y; Tetrahedron Lett 2001, V42, P7867 HCAPLUS
- (17) Kundig, E; Tetrahedron Lett 1993, V34, P7049
- (18) Langer, P; Angew Chem, Int Ed 2000, V39, P3049 HCAPLUS
- (19) Lee, W; Chem Commun 2001, P1612 HCAPLUS
- (20) Noyori, R; Asymmetric Catalysis in Organic Synthesis 1994
- (21) Oishi, T; Tetrahedron:Asymmetry 1995, V6, P1241 HCAPLUS
- (22) Ojima, I; Catalytic Asymmetric Synthesis 1993
- (23) Pan, J; J Mol Catal A: Chem 2001, V176, P19 HCAPLUS
- (24) Sartor, D; Synlett 1990, P197 HCAPLUS
- (25) Takasu, M; Synlett 1990, P194 HCAPLUS
- (26) Yang, K; Org Lett 2000, V2, P729 HCAPLUS
- (27) Yang, K; Org Lett 2002, V4, P1107 HCAPLUS

IT 500224-32-8P 500224-33-9P

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
 USES (Uses)

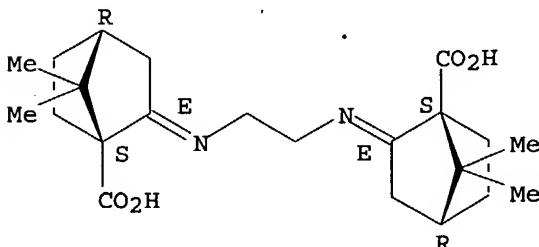
(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)

RN 500224-32-8 HCAPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyl)dinitrilo)bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

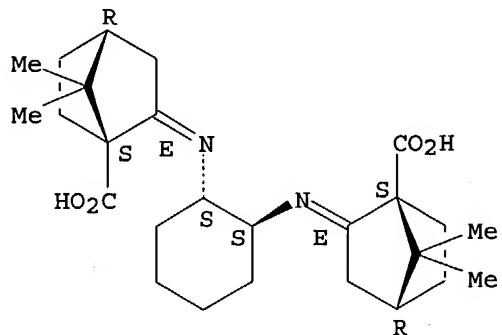


RN 500224-33-9 HCAPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[^{(1S,2S)-1,2-}cyclohexanediyldinitrilo]bis[^{7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI)} (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.



IT 500224-34-0P 500224-35-1P

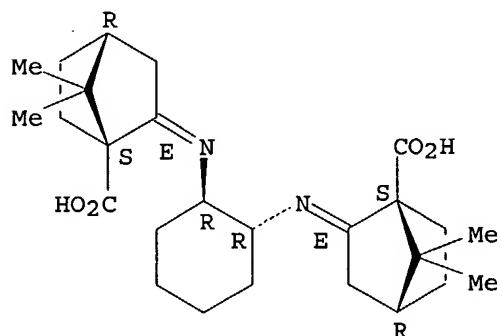
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);
PREP (Preparation); USES (Uses)
(crystal structure of)

RN 500224-34-0 HCAPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[^{(1R,2R)-1,2-}cyclohexanediyldinitrilo]bis[^{7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI)} (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.

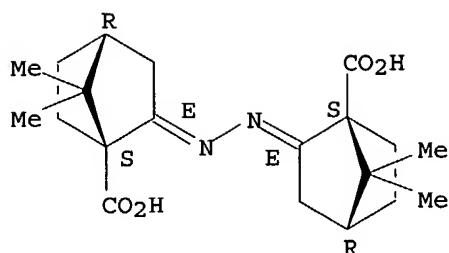


RN 500224-35-1 HCAPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-azinobis[^{7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI)} (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



L24 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:173335 HCAPLUS
 DN 136:369559
 ED Entered STN: 11 Mar 2002
 TI Enantioselective Aziridination of Alkenes with N-Aminophthalimide in the Presence of Lead Tetraacetate-Mediated Chiral Ligand
 AU Yang, Kung-Shou; Chen, Kwunmin
 CS Department of Chemistry, National Taiwan Normal University, Taipei, 116, Taiwan
 SO Organic Letters (2002), 4(7), 1107-1109
 CODEN: ORLEF7; ISSN: 1523-7060
 PB American Chemical Society
 DT Journal
 LA English
 CC 27-3 (Heterocyclic Compounds (One Hetero Atom))
 OS CASREACT 136:369559
 AB Reaction of various N-alkenoyloxazolidinones with N-aminophthalimide and lead tetraacetate in the presence of camphor-derived chiral ligands provides the desired N-phthalimidoaziridines in good to high enantiomeric excess (67-95% ee) at 0 °C within 15 min. The absolute stereochem. of the corresponding aziridine derivs. was established by chemical correlations.
 ST aziridination stereoselective alkenoyloxazolidinone aminophthalimide chiral ligand
 IT Cycloaddition reaction
 Cycloaddition reaction catalysts
 (aziridination, stereoselective; enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
 IT Ligands
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (chiral; enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
 IT Alkenes, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
 IT 87-69-4, (+)-Tartaric acid, uses 546-67-8, Lead tetraacetate
 RL: CAT (Catalyst use); USES (Uses)
 (enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
 IT 404582-34-9P 404582-36-1P 423770-45-0P
 423770-46-1P
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
 IT 423770-47-2P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)
 (enantioselective aziridination of alkenes with N-aminophthalimide in
 the presence of lead tetraacetate and a chiral ligand)

- IT 423770-56-3P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (enantioselective aziridination of alkenes with N-aminophthalimide in
 the presence of lead tetraacetate and a chiral ligand)
- IT 107-15-3, Ethylenediamine, reactions 464-78-8, Ketopinic acid
 2043-21-2 20439-47-8, (1R,2R)-1,2-Cyclohexanediamine 21436-03-3,
 (1S,2S)-1,2-Cyclohexanediamine 31978-13-9 109299-92-5 109299-93-6
 109299-94-7 227024-93-3 423770-49-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (enantioselective aziridination of alkenes with N-aminophthalimide in
 the presence of lead tetraacetate and a chiral ligand)
- IT 423770-51-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (enantioselective aziridination of alkenes with N-aminophthalimide in
 the presence of lead tetraacetate and a chiral ligand)
- IT 1875-48-5, N-Aminophthalimide
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (enantioselective aziridination of alkenes with N-aminophthalimide in
 the presence of lead tetraacetate and a chiral ligand)
- IT 151-56-4DP, Aziridine, derivs. 332923-24-7P 332923-28-1P
 423770-48-3P 423770-50-7P 423770-52-9P 423770-53-0P 423770-54-1P
 423770-55-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (enantioselective aziridination of alkenes with N-aminophthalimide in
 the presence of lead tetraacetate and a chiral ligand)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Yang, K; J Org Chem 2001, V66, P1676 HCAPLUS

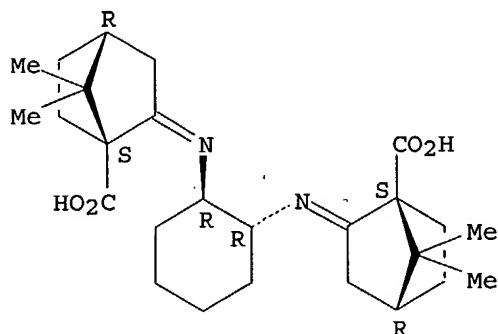
IT 404582-34-9P 404582-36-1P 423770-45-0P
 423770-46-1P

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
 USES (Uses)
 (enantioselective aziridination of alkenes with N-aminophthalimide in
 the presence of lead tetraacetate and a chiral ligand)

RN 404582-34-9 HCAPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1R,2R)-1,2-
 cyclohexanediylidinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA
 INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

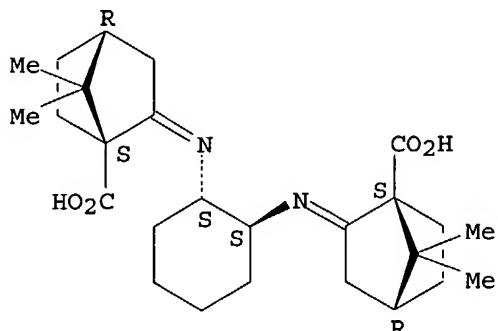


RN 404582-36-1 HCAPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1S,2S)-1,2-
 cyclohexanediylidinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA

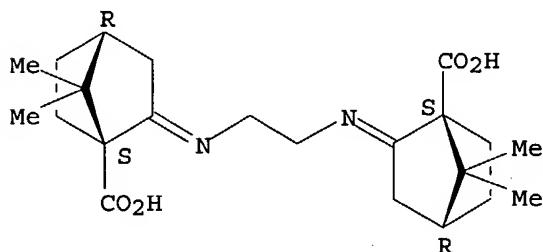
(INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



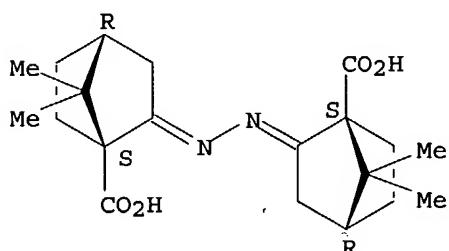
RN 423770-45-0 HCPLUS
 CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyl)dinitrilo)bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 423770-46-1 HCPLUS
 CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-azinobis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



L24 ANSWER 3 OF 3 HCPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:780044 HCPLUS
 DN 136:247173
 ED Entered STN: 26 Oct 2001
 TI A facile catalytic oxidation of activated hydrocarbons to the carbonyl functionality mediated by Mn(II) complexes

AU Pan, Jia-Fu; Chen, Kwanmin
 CS Department of Chemistry, National Taiwan Normal University, Taipei, 116,
 Taiwan
 SO Journal of Molecular Catalysis A: Chemical (2001), 176(1-2), 19-22
 CODEN: JMCCF2; ISSN: 1381-1169
 PB Elsevier Science B.V.
 DT Journal
 LA English
 CC 21-2 (General Organic Chemistry)
 OS CASREACT 136:247173
 AB Selective oxidation of activated hydrocarbons to the corresponding carbonyl functionality was achieved with good to high material yields using novel camphor-derived ligands mediated with Mn(II) as catalyst. In general, the reaction proceeds smoothly with 5 mol % of catalyst and 2.0 equiv of t-BuOOH as oxidant in CH₂Cl₂ in 5-30 min.
 ST oxidn hydrocarbon manganese camphor derived ligand
 IT Oxidation catalysts
 (facile catalytic oxidation of activated hydrocarbons to carbonyl compds.
 mediated by manganese(II) complexes)
 IT Hydrocarbons, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (facile catalytic oxidation of activated hydrocarbons to carbonyl compds.
 mediated by manganese(II) complexes)
 IT Carbonyl compounds (organic), preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (facile catalytic oxidation of activated hydrocarbons to carbonyl compds.
 mediated by manganese(II) complexes)
 IT 638-38-0, Manganese diacetate 10025-73-7, Chromium trichloride
404582-34-9 404582-36-1
 RL: CAT (Catalyst use); USES (Uses)
 (facile catalytic oxidation of activated hydrocarbons to carbonyl compds.
 mediated by manganese(II) complexes)
 IT 86-73-7, Fluorene 95-13-6, Indene 100-42-5, Styrene, reactions
 103-30-0, trans-Stilbene 103-65-1, Propylbenzene 108-88-3, Toluene,
 reactions 110-83-8, Cyclohexene, reactions 119-64-2,
 1,2,3,4-Tetrahydronaphthalene 493-05-0, Isochroman 496-11-7, Indan
 496-14-0, Phthalan 613-31-0, 9,10-Dihydroanthracene 771-98-2,
 1-Phenylcyclohexene
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (facile catalytic oxidation of activated hydrocarbons to carbonyl compds.
 mediated by manganese(II) complexes)
 IT 83-33-0P, 1-Indanon 84-65-1P, 9,10-Anthraquinone 87-41-2P, Phthalide
 93-55-0P, Propiophenone 100-52-7P, Benzaldehyde, preparation
 486-25-9P, Fluoren-9-one 529-34-0P, α-Tetralone 930-68-7P,
 2-Cyclohexen-1-one 4702-34-5P, Isochroman-1-one 10345-87-6P,
 3-Phenyl-2-cyclohexen-1-one 17488-64-1P 61463-21-6P, 1H-Inden-1-ol
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (facile catalytic oxidation of activated hydrocarbons to carbonyl compds.
 mediated by manganese(II) complexes)

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
- (1) Andrus, M; Tetrahedron Lett 1995, V36, P2945 HCPLUS
 - (2) Choudary, B; J Org Chem 1992, V57, P5841 HCPLUS
 - (3) Das, T; Tetrahedron Lett 1997, V38, P3631 HCPLUS
 - (4) DattaGupta, A; Tetrahedron Lett 1996, V37, P2633 HCPLUS
 - (5) Einhorn, C; J Chem Soc, Chem Commun 1997, P447 HCPLUS
 - (6) Finney, N; Angew Chem Int Ed Engl 1997, V36, P1720 HCPLUS
 - (7) Gokhale, A; Tetrahedron Lett 1995, V36, P1831 HCPLUS
 - (8) Groves, J; J Am Chem Soc 1987, V109, P3812 HCPLUS
 - (9) Hamachi, K; Tetrahedron Lett 1996, V37, P4979 HCPLUS
 - (10) Hudlicky, M; ACS Monography 1990, V186 HCPLUS
 - (11) Ishii, Y; J Org Chem 1995, V60, P3934 HCPLUS
 - (12) Ishii, Y; Tetrahedron Lett 1996, V37, P4993 HCPLUS

- (13) Jacobsen, E; Catalytic Asymmetric Synthesis 1993, P159 HCPLUS
 (14) Katsuki, T; Coord Chem Rev 1995, V140, P189 HCPLUS
 (15) Katsuki, T; J Synth Org Chem Jpn 1995, V53, P940 HCPLUS
 (16) Kaufman, M; J Am Chem Soc 1993, V115, P11648 HCPLUS
 (17) Kawasaki, K; Tetrahedron 1997, V53, P6337 HCPLUS
 (18) Kohmura, Y; Tetrahedron Lett 2000, V41, P3941 HCPLUS
 (19) Larock, R; Comprehensive Organic Transformations: A Guide to Functional Group Preparations 1989, P591
 (20) Lee, N; Tetrahedron Lett 1998, V39, P1385 HCPLUS
 (21) Levina, A; Tetrahedron Asymmetry 1995, V6, P147 HCPLUS
 (22) Li, W; Synthesis 1989, P293 HCPLUS
 (23) Linde, C; Angew Chem Int Ed Engl 1997, V36, P1723 HCPLUS
 (24) Linker, T; Angew Chem Int Ed Engl 1997, V36, P2060 HCPLUS
 (25) Ma, D; Tetrahedron Lett 1999, V40, P8915 HCPLUS
 (26) Malkov, A; Org Lett 2000, V2, P3047 HCPLUS
 (27) Matsunaka, K; Tetrahedron Lett 1999, V40, P2165 HCPLUS
 (28) Murahashi, S; Angew Chem Int Ed Engl 1995, V34, P2443 HCPLUS
 (29) Muzart, J; Chem Rev 1992, V92, P113 HCPLUS
 (30) Muzart, J; J Mol Catal 1994, V66, P155
 (31) Muzart, J; Tetrahedron Lett 1987, V28, P2131 HCPLUS
 (32) Muzart, J; Tetrahedron Lett 1995, V36, P5735 HCPLUS
 (33) Pearson, A; J Org Chem 1985, V50, P2791 HCPLUS
 (34) Rispens, M; Tetrahedron Asymmetry 1995, V6, P661 HCPLUS
 (35) Sakaguchi, S; J Chem Soc, Chem Commun 1998, P2037 HCPLUS
 (36) Schulz, M; Tetrahedron Asymmetry 1998, V9, P4341 HCPLUS
 (37) Sekar, G; J Org Chem 1998, V63, P2961 HCPLUS
 (38) Shilov, A; Chem Rev 1997, V97, P2879 HCPLUS
 (39) Sodergren, M; Tetrahedron Lett 1996, V37, P7577
 (40) Yamazaki, S; Org Lett 1999, V1, P2129 HCPLUS
 (41) Zhao, D; Synthesis 1994, P915 HCPLUS
 (42) Zondervan, C; Tetrahedron Asymmetry 1996, V7, P1895 HCPLUS

IT 404582-34-9 404582-36-1

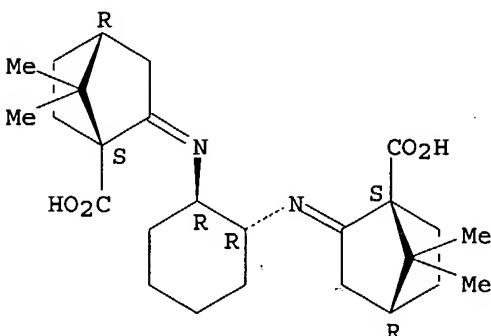
RL: CAT (Catalyst use); USES (Uses)

(facile catalytic oxidation of activated hydrocarbons to carbonyl compds.
mediated by manganese(II) complexes)

RN 404582-34-9 HCPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1R,2R)-1,2-cyclohexanediylidinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

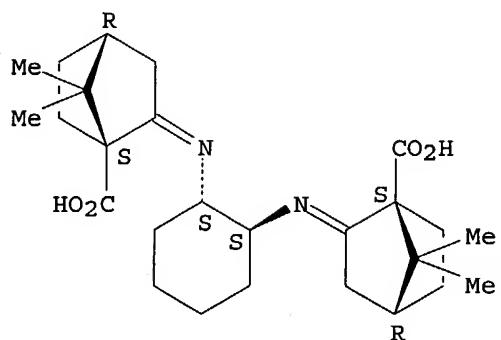


RN 404582-36-1 HCPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1S,2S)-1,2-cyclohexanediylidinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



=>